REMARKS/ARGUMENTS

This Amendment is in response to the Office Action mailed July 17, 2008. Claims 1, 3-9, 11-13, 17, 18, and 20-25 were pending in the present application. This Amendment amends claim 23, leaving pending the application claims 1, 3-9, 11-13, 17, 18, and 20-25. Applicants submit that no new matter has been introduced by virtue of these amendments. Reconsideration of the rejected claims is respectfully requested.

Objection to Claim 23

Claim 23 is objected to because of an informality resulting from a typographical error. The claim as been amended to correct the typographical error.

35 U.S.C. §103(a) Rejection of Claims 1, 4-9, 11-13, 17-18, and 20-25

Claims 1, 4-9, 11-13, 17-18, and 20-25 are rejected under 35 U.S.C. §103(a) as being unpatentable over Doyle (U.S. Patent No. 7,134,012, hereinafter "Doyle") in view of Woundy (U.S. Patent No. 6,009,103, hereinafter "Woundy"). Applicants respectfully traverse the rejection.

Applicant's independent claim 24 relates to a novel method for providing port security in a network device. In one embodiment, a data packet comprising a source IP address and a MAC address is received on a port of the network device. The MAC address in the data packet is then checked against a source IP address/MAC address pair table maintained by the network device. If the MAC address is found in the table, the source IP address in the data packet is learned. Significantly, the process of learning the source IP address is not initiated immediately; rather, this learning process is delayed from the time of receipt of the data packet until a predetermined amount of traffic has passed through the port. Once the source IP address is learned, the source IP address and MAC address in the data packet is stored in the source IP address/MAC address pair table. This table is used to control the transmission of data packets through the port.

In accordance with the above, Applicants' independent claim 24 recites:

A method for providing port security in a network device, the method comprising:

receiving a first data packet on a port of the network device, the first data packet including a first MAC address and a first source IP address;

determining if the first MAC address is a new MAC address that is not included in a table of the network device, the table configured to store a plurality of source IP address and MAC address pairs;

if the first MAC address is a new MAC address, learning the first source IP address, wherein the first MAC address and the first source IP address form a first source IP address and MAC address pair, and wherein said learning is delayed from a time of receipt of the first data packet until a predetermined amount of traffic has passed through the port;

upon learning, storing the first source IP address and MAC address pair in the table; and

using the table to control transmission of data packets through the port.

(Applicants' independent claim 24).

Applicants respectfully submit that the features of claim 24 are not taught or suggested by Doyle or Woundy, considered individually or in combination.

I. There is no rationale for combining Doyle and Woundy to teach or suggest the features of Applicants' claim 24

As an initial matter, Applicants submit that there is no rationale for combining the Doyle and Woundy references to teach or suggest the features of Applicants' claim 24. As best understood, the Office Action relies on Doyle to teach the majority of the features of claim 24, and relies on Woundy to teach the singular feature of "wherein said learning is delayed from a time of receipt of the first data packet until a predetermined amount of traffic has passed through the port." The Office Action rationalizes this combination by asserting "Doyle discloses the use of a single DHCP server, thus the use of only a single table of the network device… Woundy discloses a plurality of DHCP… It would have been obvious to one of ordinary skill in the art at the time of applicants' invention to include a plurality of DHCP servers… given the benefit of eliminate [sic] a single point of failure." (Office Action: pgs. 4-5; emphasis added). Thus, the

Office Action apparently construes both Doyle and Woundy as being directed to DHCP servers, with Doyle describing a single DHCP server and Woundy describing multiple DHCP servers.

However, contrary to the Office Action, the invention of Doyle does not relate to DHCP servers at all. Rather, the invention of Doyle relates to techniques performed by a router (such as router RY (120) illustrated in FIG. 1 of Doyle). For example, Doyle describes techniques for filtering packets received at a port of a router. Applicants note that Doyle does make reference to a "DHCP request," but merely as an example of a type of data packet that may be received or forwarded by a router. (*See e.g.*, Doyle: col. 2, lines 44-51). This reference to "DHCP request" does not indicate that the techniques described in the Doyle apply to a DHCP server.

In contrast, the invention of Woundy relates to techniques performed by DHCP servers. For example, Woundy describes techniques performed by one or more DHCP servers for allocating IP addresses to network devices.

Since Doyle relates to techniques performed by a router, whereas Woundy relates to techniques performed by DHCP servers, the Office Action's assertion that the combination of Doyle and Woundy gives "the benefit of eliminating a single point of failure" because Doyle discloses a "single DHCP server" and Woundy discloses "a plurality of DHCP servers" is erroneous – Doyle does not disclose a "single DHCP server" at all and thus there is no "single point of failure" to eliminate. Accordingly, Applicants submit that there is no rationale for combining these two references to teach or suggest the features of claim 24.

II. Doyle and Woundy fail to teach or suggest "wherein said learning is delayed from a time of receipt of the first data packet until a predetermined amount of traffic has passed through the port" as recited in Applicants' claim 24

Applicants submit that Doyle and Woundy fail to teach or suggest learning a source IP address of a data packet if the MAC address of the data packet is not found in a source IP address/MAC address pair table, "wherein said learning is delayed from a time of receipt of the first data packet until a predetermined amount of traffic has passed through the port" as recited in claim 24. The Office Action concedes that this feature of delayed learning is not

taught by Doyle. However, the Office Action goes on to assert that this feature is taught by Woundy because:

> Woundy discloses a plurality of DHCP, which inherently comprise a plurality of IP/MAC address pairs tables (Woundy, col. 1 lines 58-61)… An ordinary artisan would readily recognize, as also indicated by Woundy, a plurality of devices, such as DHCP servers, must be synchronized for all the devices to have current table entries, consistent with all other devices and that the process of synchronization inherently causes a delay. During the delay, depending on the LAN's type and bandwidth from the type of a time of receipt of the first packet until device's learning of the first source IP address, a predetermined amount of traffic inherently passes through the port.
>
> (Office Action: pg. 5).

Applicants respectfully disagree for at least the following reasons.

A. The length of the synchronization delay allegedly taught by Woundy is not based the amount of traffic passed through a port

Claim 24 specifically recites that the learning of a source IP address in a data packet by a network device is delayed from a time of receipt of the data packet until a predetermined amount of traffic has passed through a port of the network device. In other words, the length of the learning delay is based on the amount of traffic passed through a port, because the learning process cannot proceed until that amount of traffic has passed through.

In contrast, the Office Action merely asserts that Woundy teaches (1) synchronizing table entries between a plurality of DHCP servers, thereby causing a synchronization delay, and (2) passing traffic through the ports of the DHCP servers during the synchronization delay. Thus, (1) and (2) merely indicate that two independent processes may occur simultaneously – *i.e.*, the synchronization delay and the receipt of network traffic on a port. This does not teach or suggest that the length of the synchronization delay is necessarily based on an amount of traffic passed through a port. For example, nowhere does Woundy teach or suggest that the synchronization process is delayed until a certain number of data packets have been passed through a port. Accordingly, Woundy fails to teach or suggest "wherein said

learning is delayed from a time of receipt of the first data packet until a predetermined amount of traffic has passed through the port" as recited in claim 24. (Emphasis added).

B. The synchronization delay allegedly taught by Woundy does not begin "from a time of receipt of a first data packet"

Claim 24 specifically recites that the learning of a source IP address in a data packet by a network device is delayed from a time of receipt of the data packet until a predetermined amount of traffic has passed through a port of the network device. In other words, the delay only begins once the data packet has been received at the network device.

In contrast, the synchronization delay of Woundy (as explained in the Office Action) apparently refers to the total delay resulting from synchronizing IP information among a plurality of different DHCP servers. Thus, this synchronization delay does not begin when IP information is received at a particular DHCP server; rather, this synchronization delay apparently begins when the IP information is first sent out from an initial DHCP server to other DHCP servers. Accordingly, Woundy fails to teach or suggest "wherein said learning is delayed from a time of receipt of the first data packet until a predetermined amount of traffic has passed through the port" as recited in claim 24. (Emphasis added).

C. Woundy makes no reference to a "predetermined" amount of traffic

Claim 24 specifically recites that the learning of a source IP address in a data packet by a network device is delayed from a time of receipt of the data packet until a predetermined amount of traffic has passed through a port of the network device. In other words, the amount of traffic that is necessary to end the learning delay is determined beforehand.

The Office Action asserts that Woundy teaches this concept because the amount of traffic received at a port of a DHCP server will depend on "the LAN's type and bandwidth." (Office Action: pg. 5). Applicants respectfully disagree. As is well known in the art, the characteristics of a network, such as type or bandwidth, merely determine the maximum theoretical amount of traffic that can be supported. The actual amount of traffic that is passed among the various devices on the network will vary considerably based on conditions at the time

of operation, such as network load. Accordingly, the amount of traffic passed through a port of DHCP server cannot be considered predetermined merely based on LAN type or bandwidth, since the actual amount of traffic passed will vary in an unpredictable manner. Accordingly, Woundy fails to teach or suggest "wherein said learning is delayed from a time of receipt of the first data packet until a predetermined amount of traffic has passed through the port" as recited in claim 24. (Emphasis added).

For at least the foregoing reasons, Applicants submit that independent claim 24 is not rendered obvious by Doyle and/or Woundy, and respectfully request that the rejection of claim 24 be withdrawn.

Independent claims 17 and 25 recite features that are substantially similar to independent claim 24, and are thus believed to be allowable for at least a similar rationale as discussed for claim 24, and others.

Dependent claims 1, 4-9, 11-13, 18, and 20-23 depend (either directly or indirectly) from independent claims 24 and 17 respectively, and are thus believed to be allowable for at least a similar rationale as discussed for claims 24 and 17, and others.

35 U.S.C. §103(a) Rejection of Claim 3

Claim 3 is rejected under 35 U.S.C. §103(a) as being unpatentable over Doyle in view of Woundy and further in view of Whelan (U.S. Publication No. 2004/0003285, hereinafter "Whelan"). Applicants respectfully traverse the rejection.

Claim 3 depends indirectly from independent claim 24, which is not anticipated or rendered obvious by Doyle and/or Woundy as discussed above. As best understood, Whelan does not provide any teaching that would remedy the deficiencies of Doyle and Woundy in this regard. Thus, even if Doyle, Woundy, and Whelan were combined (although there appears to be no rationale for combining), the resultant combination would not teach or suggest all of the features of claim 3. Accordingly, Applicants submit that claim 3 is allowable over the cited art, and respectfully request that the rejection of this claim be withdrawn.

Amendments to the Claims

Unless otherwise specified, amendments to the claims are made for purposes of clarity, and are not intended to alter the scope of the claims or limit any equivalents thereof. The amendments are supported by the Specification as filed and do not add new matter.

CONCLUSION

In view of the foregoing, Applicants believe all claims now pending in this Application are in condition for allowance. The issuance of a formal Notice of Allowance at an early date is respectfully requested.

If the Examiner believes a telephone conference would expedite prosecution of this application, please telephone the undersigned at 650-326-2400.

Respectfully submitted,

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